What is claimed is:

1. A method of stimulating an immune response in a mammal having a pathological condition, comprising:

(a) obtaining a biological fluid from the mammal;

(b) contacting the biological fluid with a binding partner capable of specifically binding to a targeted immune system inhibitor to produce an altered biological fluid having a reduced amount of the targeted immune system inhibitor; and

(c) administering the altered biological fluid to the mammal.

2. The method of claim 1, wherein the binding partner is attached to an inert medium to form an absorbent matrix.

3. The method of claim 2, wherein the binding partner is covalently joined to the inert medium.

4. The method of claim 2, wherein the inert medium is a hollow fiber.

5. The method of claim 2, wherein the inert medium is a macroporous bead.

6. The method of claim 2, wherein the inert medium is a cellulose-based fiber.

7. The method of claim 2, wherein the inert medium is a synthetic fiber.

8. The method of claim 2, wherein the inert medium is a flat or pleated membrane.

9. The method of claim 2, wherein the inert medium is a silica-based particle.

10. The method of claim 1, wherein said immune system inhibitor is selected from the group of host-derived immune system inhibitors consisting of interleukin-1 receptor antagonist, transforming growth factor-β, interleukin-4, interleukin-10, or the soluble receptors for interleukin-1, interleukin-2, interleukin-4, interleukin-6, interleukin-7, interferon-γ and tumor necrosis factors α and β.

11. The method of claim 1, wherein said immune system inhibitor is selected from the group of immune system inhibitors produced by microorganisms consisting of complement inhibitors, and homologues of interleukin-10, soluble receptors for interleukin-1, interferons α, β, and γ, and tumor necrosis factors α and β.

12. The method of claim 1, wherein said binding partner is a naturally-occurring binding partner for the targeted immune system inhibitor.

13. The method of claim 12, wherein said naturally-occurring binding partner is produced recombinantly.

14. The method of claim 1, wherein said binding partner is a fragment of a naturally-occurring binding partner.

~~15.~~ 13. The method of claim ~~14~~ 12, wherein said fragment is produced recombinantly.

~~16.~~ 14. The method of claim 1, wherein said binding partner is a monoclonal antibody.

~~17.~~ 15. The method of claim ~~16~~ 14, wherein said monoclonal antibody is produced recombinantly.

18. The method of claim 1, wherein said binding partner is a fragment of a monoclonal antibody.

17 ~~19~~. The method of claim ~~18~~ 16, wherein said monoclonal antibody fragment is produced recombinantly.

~~20. The method of claim 1, wherein the biological fluid is in contact with a plurality of binding partners comprising a mixture of different monoclonal antibodies, or fragments thereof, capable of specifically binding to the targeted immune system inhibitor.~~

19 ~~21~~. The method of claim ~~20~~ 18, wherein the monoclonal antibodies, or fragments thereof, are produced recombinantly.

~~22. The method of claim 1, wherein the biological fluid is contacted with a plurality of binding partners comprising a mixture of different monoclonal antibodies, or fragments thereof, capable of specifically binding to a plurality of targeted immune system inhibitors.~~

21 ~~23~~. The method of claim ~~22~~ 20, wherein the monoclonal antibodies, or fragments thereof, are produced recombinantly.

22 ~~24~~. The method of claim 1, wherein said binding partner is a polyclonal antibody preparation.

~~25. The method of claim 1, wherein said binding partner is comprised of fragments of a polyclonal antibody preparation.~~

26. The method of claim 1, wherein the biological fluid is in contact with a plurality of binding partners comprising a mixture of different polyclonal antibody preparations, or fragments thereof, capable of specifically binding to the targeted immune system inhibitor.

27. The method of claim 1, wherein the biological fluid is in contact with a plurality of binding partners comprising a mixture of different polyclonal antibody preparations, or fragments thereof, capable of specifically binding to a plurality of targeted immune system inhibitors.

26 ~~28~~. The method of claim 1, wherein the binding partner is a synthetic peptide.

27 ~~29~~. The method of claim 26 ~~28~~, wherein the synthetic peptide is conjugated to a carrier.

28 ~~30~~. The method of claim 1, wherein the biological fluid is contacted with a plurality of binding partners comprising a mixture of synthetic peptides capable of specifically binding to the targeted immune system inhibitor.

29 ~~31~~. The method of claim 28 ~~30~~, wherein said mixture of synthetic peptides is conjugated to a carrier.

30 ~~32~~. The method of claim 1, wherein the biological fluid is contacted with a plurality of binding partners comprising a mixture of synthetic peptides capable of specifically binding to a plurality of targeted immune system inhibitors.

31 ~~33~~. The method of claim 30 ~~32~~, wherein said mixture of synthetic peptides is conjugated to a carrier.

Sub. A1 ~~34. The method of claim 1, wherein steps (a) through (c) are repeated.~~

~~35. The method of claim 1, wherein the biological fluid is whole blood.~~

36. The method of claim 35, further comprising after step (a) the steps of:

(a) separating the whole blood into a cellular component and a plasma component or a fraction of the plasma component;

(b) contacting the plasma component or fraction thereof with the binding partner in step (b) to form an altered plasma component or fraction;

(c) combining the cellular component with the altered plasma component or fraction to produce altered whole blood; and

(d) administering the altered whole blood to the mammal.

37. The method of claim 1, wherein the mammal is human.

38. The method of claim 1, wherein the mammal is non-human.

39. The method of claim 1, further comprising removing the binding partner bound to the targeted immune system inhibitor from the biological fluid prior to step (c).

40. The method of claim 39, wherein the binding partner bound to the targeted immune system inhibitor is removed by mechanical means.

41. The method of claim 39, wherein the binding partner bound to the targeted immune system inhibitor is removed by chemical or biological means.

Sub D2

42. A method for stimulating an immune response in a mammal having a pathological condition, comprising:

(a) obtaining a biological fluid from a mammal;

(b) separating the acellular component of the biological fluid containing a targeted immune system inhibitor from the cellular component of the biological fluid;

(c) contacting the acellular component containing the targeted immune system inhibitor with a binding partner capable of specifically binding to the targeted immune system inhibitor;

(d) isolating the binding partner bound to the targeted immune system inhibitor from the acellular component to produce an altered acellular component;

(e) combining the altered acellular component with the cellular component to produce an altered biological fluid; and

(f) administering the altered biological fluid to the mammal.

43. ~~The method of claim 42, wherein the biological fluid is whole~~ blood.

44. An apparatus for reducing the amount of a targeted immune system inhibitor in a biological fluid, comprising:

(a) a means for separating the biological fluid into a cellular component and an acellular component or fraction thereof;

(b) an absorbent matrix comprising an inert medium attached to a binding partner to produce an altered acellular component or fraction thereof having a reduced amount of the targeted immune system inhibitor, wherein the acellular component or fraction thereof is in fluid communication with the absorbent matrix; and

(c) a means for combining the cellular fraction with the altered acellular component or fraction of the biological fluid to produce an altered biological fluid.

45. The apparatus of claim 44, wherein the biological fluid is whole blood.

46. The apparatus of claim 44, wherein the acellular component or fraction thereof is a plasma component or fraction thereof.

47. An apparatus for reducing the amount of a targeted immune system inhibitor in a biological fluid, comprising:

(a) a means for separating the biological fluid into a cellular component and an acellular component or fraction thereof;

(b) a mixing chamber in which the acellular component, or fraction thereof, is exposed to a binding partner to form a binding partner/immune system inhibitor complex;

(c) a means for removing the binding partner/immune system inhibitor complex to produce an altered acellular component, or fraction thereof, having a reduced amount of the targeted immune system inhibitor, wherein the means for removing the complex is by mechanical means or by chemical or biological means; and,

(d) a means for combining the cellular fraction with the altered acellular component or fraction of the biological fluid to produce an altered biological fluid.

48. The apparatus of claim 45, wherein the biological fluid is whole blood.

49. The apparatus of claim 45, wherein the acellular component or fraction thereof is a plasma component or fraction thereof.

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